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Can a word paint a thousand pictures? Brand- evoked mental imagery in advertising

¿Una palabra vale más que mil imágenes? Imágenes mentales evocadas por las marcas en la publicidad

Uma palavra vale mais do que mil imagens? Imagens mentais evocadas pelas marcas na publicidade

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ABSTRACT | In this research we have used the logo as stimuli to test the brand-evoked mental imagery effect. According to the Dual Coding Theory, familiar brands facilitate additional pathways –visual and verbal– to retrieve arguments to build mental imagery; therefore, brand stimuli in advertising connects consumer with relevant memories and past experiences. Through an online experiment, applied to a sample of undergraduate students this study provides empirical evidence of the differences in mental imagery evoked by mobile digital advertising due to brand familiarity. The hypothesis posited that a familiar brand will be more likely to increase the ability of an ad to evoke mental image through its three dimensions: vividness, quantity, and elaboration. The individual's ability to use imagery processing information was controlled. Results show differences in the dimensions of mental imagery due to brand familiarity. Findings suggest that below certain level of brand familiarity, mental imagery of ads may decline. Brand familiarity could enhance advertising information processing and thus the generation of visual mental imagery.

KEYWORDS: mental imagery; brand; brand familiarity; advertising processing; vividness.

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RESUMEN | *Los autores proponen que la marca, elemento común a todos los anuncios, puede mejorar las imágenes mentales provocadas por la publicidad. Basándose en la Teoría de la Codificación Dual, las marcas conocidas facilitan vías adicionales –visuales y verbales– para recuperar argumentos con los que construir imágenes mentales. Por lo tanto, los estímulos de marca en publicidad conectan al consumidor con recuerdos y experiencias pasadas relevantes. La hipótesis plantea que es más probable que una marca familiar aumente la capacidad de un anuncio en el móvil de evocar imágenes mentales mediante sus tres dimensiones: vivacidad, cantidad y elaboración. Se controló la capacidad del individuo para utilizar imágenes en el procesamiento de la información. Por medio de un experimento en línea, este estudio proporciona pruebas empíricas de las diferencias en las imágenes mentales evocadas por la publicidad digital debido a la familiaridad de la marca. Los resultados también muestran diferencias en las dimensiones de las imágenes mentales debido a la familiaridad con la marca. Los hallazgos sugieren que, por debajo de cierto nivel de familiaridad con la marca, las imágenes mentales de los anuncios pueden disminuir. La familiaridad con la marca podría mejorar el procesamiento de la información publicitaria y, por lo tanto, la generación de imágenes mentales visuales.*

PALABRAS CLAVES: *imágenes mentales; marca; familiaridad con la marca; procesamiento de la publicidad; vívido.*

RESUMO | Os autores propõem que, a marca, um elemento comum a todos os anúncios publicitários, pode melhorar as imagens mentais suscitadas pela publicidade. Com base na Teoria da Dupla Codificação, as marcas familiares facilitam vias adicionais -visuais e verbais- para recuperar argumentos para construir imagens mentais, pelo que os estímulos da marca na publicidade ligam o consumidor a memórias e experiências passadas. A hipótese postula que uma marca familiar será mais susceptível de aumentar a capacidade de um anúncio móvel de evocar uma imagem mental através das suas três dimensões: vivacidade, quantidade e elaboração. A capacidade do indivíduo de utilizar informação de processamento de imagem foi controlada. Através de uma experiência on-line, este estudo fornece evidências empíricas de diferenças na imagem mental evocadas pela publicidade digital, devido à familiaridade com a marca. Os resultados também mostram diferenças nas dimensões das imagens mentais devido à familiaridade com a marca. Os resultados sugerem que abaixo de determinado nível de familiaridade com a marca, as imagens mentais dos anúncios podem diminuir. A familiaridade com a marca poderia melhorar o processamento de informação publicitária e, assim, a geração de imagens mentais visuais.

PALAVRAS-CHAVE: imagens mentais; marca; familiaridade com a marca; processamento publicitário; vivacidade.

INTRODUCTION

Among marketing stimuli, digital advertising is a powerful medium for passing the right message to the customer. In 2021, according to Zenith Media (2019), 52% of advertising budget will be address to the Internet, since its growing importance is gaining place on the mobile phone environment. In countries such as Spain, the mobile is the device most frequently used to access the Internet (97%). From 2018 to 2019, the access to the Internet through the PC decreased 6.8%, and increased by 8.6% via the mobile (Ditrendia, 2020). No doubt, the present is mobile, and the future even more (Herrero-Diz, Tapia-Frade, & Varona-Aramburu, 2020).

Mobile advertising represents new challenges, since the models and experiences developed for traditional media may need to be reviewed in the digital market (Truong, McColl & Kitchen, 2010; Murillo-Zegarra, Ruiz-Mafe, & Sanz-Blas, 2020). High volume of advertising inputs competing for the scarce user's attention requires mobile advertising to provide inputs that allow users, at a glance, to imaging what it would feel like to use or to consume the product, either when products are advertised or when they are sold through virtual stores. In other words, to create imagery-evoking advertising that elicits vivid, abundant, and elaborated mental images.

Mental imagery, sometimes referred to as visualizing or seeing in the mind's eye (MacInnis & Price, 1987) has the ability to influence several cognitive and affective responses as antecedents of behavioral responses to advertising messages. In the digital environment, behavioral response could be measured in terms of ad's clicks. Mental imagery is significant to advertising, due to its roles in creating expectations. In situations in which products cannot be experienced physically, evoking mental images becomes critical to influence purchase intentions (Li, Daugherty, & Biocca, 2003). These conditions apply to advertising in general but are mainly relevant when selling happens through electronic media devices – mobiles, tablets, PCs (Yoo & Kim, 2014).

Today, the challenge for marketing strategists is to create imagery-evoking advertising that helps individuals visualize, immediate and clearly, how a donut would taste, for example, or how they would look wearing a new pair of jeans or they would feel swimming in the pool of a luxurious hotel.

To do so, each aspect of the message becomes relevant to achieve these results, since the advertising stimulus is the result of the interaction of all the elements—pictures, texts, and the brand. Advertising literature recognizes that pictures, such as photographs, drawing, and illustrations encourage mental imagery processing (Argyriou, 2012).

Also, several individual aspects that moderate advertising imagery processing have been analyzed: familiarity with the picture stimuli (Burns, Biswas, & Babin, 1993), congruency (Smith & Shaffer, 2000), culture (Mikhailitchenko, Javalgi, Mikhailitchenko, & Laroche, 2009), propensity to experience visual imagery (Fennis, Fennis, Das, & Fransen, 2011; Yang & Guo, 2015), reliance on the experiential system (Argyriou, 2012; Chang, 2013), mood state (Myers & Sar, 2013), positive aspects of consumers' imagination (Maier & Dost, 2018), or consumers' goal (Jiang, Adaval, Steinhart, & Wyer, 2014).

However, an issue that has not yet been considered, to the best of our knowledge, is the role of the advertised brand on mental imagery elicitation. Consumers are constantly exposed to a brand's design and identity –name, logo, and signage– whether they search for, are shopping for, or using a product or service, or even throughout their everyday life (Brakus, Smith, & Zarantonello, 2009). These brand-related stimuli are an important and an easy to retrieve source of mental imagery that has not yet been analyzed, despite the influence of mental imagery on attitudinal and behavioral judgements (Lee & Gretzel, 2012). Moreover, the influence of the brand on mental imagery during the advertising processing has been deliberately controlled using fictional brand names on ad-stimuli experimental designs (Bone & Ellen, 1992; Burns et al., 1993; Unnava, Agarwal, & Haugtvedt, 1996; Miller, Hadjimarcou, & Miciak, 2000; Fennis et al., 2011; Lee & Gretzel, 2012; Chang, 2013). Under these conditions, the brand, a relevant aspect of advertising, is not present.

Therefore, when consumers engage in mobile advertising processing, they experience the advertised brand in their mind´s eye. The mental imagery evoked by the brand is believed to facilitate and assist in the persuasion process of mobile advertising. We will refer to this processing as brand-evoked mental imagery.

In this study, we explore the effect of brand-evoked mental imagery in the context of mobile advertisement. Specifically, we explore what happens to mental imagery processing (how it changes) when the brand advertised differs in familiarity (Keller, 1993; Aaker & Stayman, 1992), and how this affects the consumer's engagement in mobile ads mental imagery processing.

This research attempts to contribute to the literature by reviewing the construct of mental imagery developed for traditional media (MacInnis & Price, 1987; Bone & Ellen, 1992; Burns et al., 1993; Unnava et al., 1996; Miller et al., 2000; Fennis et al., 2011) in the digital market, providing a better understanding of mobile advertising and the mental imagery evoked by it.

The study could also have practical implications for advertisers since the results provide evidence of the brand's relevance in mobile advertising processing. Brands are amongst the most valuable assets of a company (Madden, Fehle, & Fournier, 2006), and represent the main link between the company and the customer. Scholars and practitioners benefit from this asset through the development of more efficient communication strategies.

In the following sections, we present the literature review and the hypotheses, then we give detailed information about our study and, finally we conclude by specifying the research´s specific contributions and suggesting research lines in this area.

Mental Imagery Conceptual Framework

Mental imagery has been defined as "a process by which sensory information is represented in working memory" (MacInnis & Price, 1987, p. 473). This mental representation encompasses all sensory modalities: visual, auditory, olfactory, kinesthetic, gustatory, and haptic. However, research has primarily focused on the first dimension due to the dominance of visual images in our perception. Two-thirds of all perceptual information that reaches the brain does so through the visual system (Zaltman, 1997). Visual processing, the personal tendency to form images, seems to be innate rather than a preference primed by situational factors (Amit, Hoeflin, Hamzah, & Federenko, 2017).

MacInnis and Price (1987) developed a conceptual framework for the study of mental imagery that was later adapted by Burns and his colleagues (1993) for research in the advertising field. This conceptual framework initially identified three constructs: imagery-eliciting stimuli as an antecedent of mental imagery, mental imagery that mediates the effect of different tactics used in advertising, and the resultant attitudinal and behavioral judgments. Bone and Ellen (1993) incorporate the study of moderator variables that modify the strength of the relationship between the stimuli and the mental imagery (figure 1). This model may need to be reviewed to meet the digital market challenges (Truong et al., 2010).

Mental imagery encompasses three main dimensions: vividness, quantity, and elaboration (Babin & Burns, 1998). Vividness refers to the clarity with which the individual experiences an image and reflects its quality, intensity, and distinctiveness (Marks, 1973). Quantity refers to the number of images that come to mind evoked by a stimulus (McGill & Anand, 1989). Elaboration refers to the activation of information, beyond that provided by the stimulus, in the generation of mental imagery (Babin & Burns, 1998).

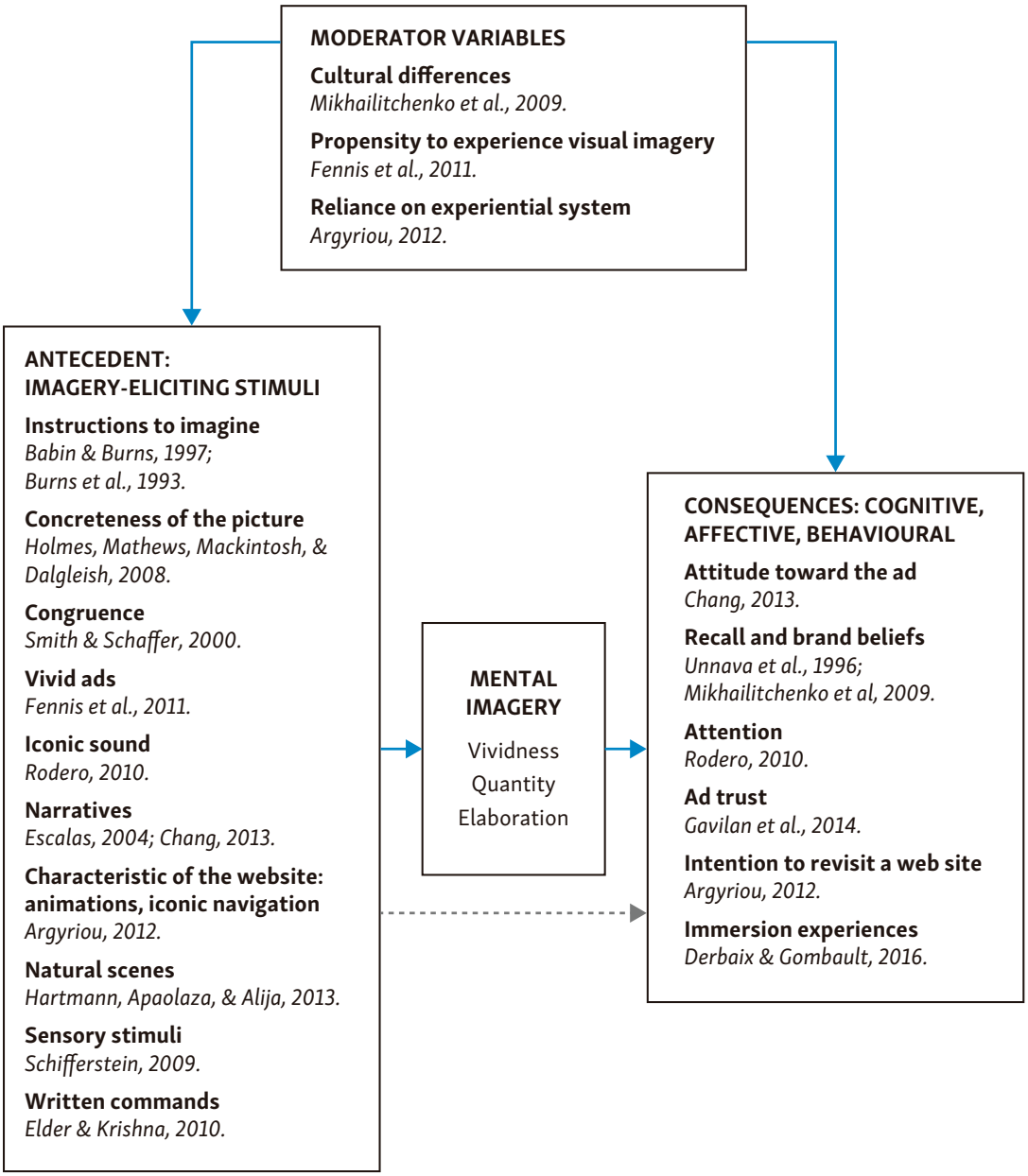

Figure 1. Mental Imagery Conceptual Framework

Source: Own elaboration.

Imagery-Eliciting Stimuli: Pictures and Words

Different mechanisms have been identified that elicit mental imagery (Ha, Huang, & Park, 2019). Prior research in the advertising literature provides evidence that certain features of pictures encourage mental imagery processing, such as concrete vs. abstract (Babin & Burnes, 1997; Holmes et al., 2008); vivid vs. pallid (Fennis et al., 2011); congruent vs. incongruent (Smith & Schaffer, 2000), and nature scenes (Hartmann et al., 2013). Results suggest that concrete, vivid, congruent, and nature pictures are more efficient in their ability to generate mental imagery.

In addition, research focusing on ad content suggests that transformational ads –oriented towards the experience of using/consuming the advertised brand as a personal experience– elicits more vivid and elaborated mental imagery than informational ads –oriented towards providing relevant and verifiable information about the brand. Informational ads are cognitive-based and boost analytical processing, whereas transformational ads are affect-based and facilitate the recall of the subject´s past experiences and the overlay of its own feelings and fantasies onto the scene, thus leading to a vicarious consumption experience (Myers & Sar, 2013; Gavilan et al., 2014).

In line with the idea that customers may feel as though they are physically experiencing the ad, some authors have analyzed the effect of narrative advertising, which depicts product consumption and its consequences, in association with aspects that people desire, such as romance or adventure (Escalas, 2004). Narrative advertising improves comprehension and fosters mental imagery of the depictions in the narratives (Chang, 2013).

In addition, words or written commands have been proven to stimulate mental imagery in consumer contexts (Elder & Krishna, 2010). Concrete wording is more effective than abstract wording in generating visual imagery when used in advertising (Burns et al., 1993). High imagery words are remembered better than low imagery words, and result in the formation of verbal and imaginal codes in the memory (Unnava et al., 1996).

Imagery-Eliciting Stimuli: Brand Familiarity

Brands are represented in the consumer´s memory as networks of mental representations that are linked by connections that vary in strength. Thus, brands exist as cognitive structures consisting of meanings and associations clusters (Keller, 1993; Keller, 2003).

Brand familiarity reflects a consumer's level of direct and indirect experiences with a brand (Park & Stoel, 2005). Increased brand familiarity is the result of exposure to the brand through advertisements or in a store, in addition to the prior purchase, and/or usage, of the brand. Previous research provides some insight into how brand familiarity influences the way a consumer processes the information (Hoyer & Brown, 1990), suggesting that brand familiarity may influence the recall of advertising messages (Kent & Allen, 1994). A consumer's ability to recognize the brand under different circumstances influences the likelihood of the brand coming to mind spontaneously and the ease with which it does so. Research shows that brand familiarity stimulates the recall of advertising messages (Campbell & Keller, 2003) and influences the effectiveness of the advertising appeal (Rhee & Jung, 2019).

At the core of imagery processing is information retrieval. Explanations of mental imagery processing suggest that the effects of imagery stem from the availability of imaginal information based on the notion of multiple retrieval paths (Paivio, 1990).

According to Paivio's dual coding theory (1990), the nature of mental representation triggered by a stimulus is based on the notion that there are two ways into which knowledge is acquired and stored: verbal associations and visual imagery, and both can be used when recalling information (Sternberg, 2003). Familiar and well-known brands, and those whose contents appeal to the different senses and/or combine visual and verbal encoding, facilitate additional pathways to retrieve arguments with which to build mental imagery. Likewise, brand experiences create multiple encoding processes and multiple retrieval pathways that will be used when remembering. The more information available at the time of the decision, the stronger the mental representation. Given these arguments, it is expected that brand familiarity will facilitate message processing by providing a pathway to retrieve mental images (Yu, Cho, & Johnson, 2017). Thus, we anticipate that a consumer's mental imagery (vividness, quantity, and elaboration) representation will differ when, in an ad, the same pictorial input is accompanied by a well-known, highly-reputable brand as opposed to a fictitious brand, or a brand with a dubious reputation.

The foregoing discussion of imagery and branding literature leads us to our formal hypotheses, within the advertising context :

> *H1.* A familiar (vs. unfamiliar) brand will be more likely to enhance the ability of a mobile ad to evoke mental imagery (vividness, quantity, and elaboration).

To test this hypothesis, we examine the differences in the three dimensions of mental imagery related to brand familiarity in three different settings: using a well-known brand, a poorly known brand, and a fictitious brand.

METHODOLOGY

To test the proposed hypothesis, we designed an experiment with mobile ads. A mobile ad design of a familiar (vs. unfamiliar) brand was used to measure the evoked mental imagery through the three dimensions of mental imagery (vividness, quantity, and elaboration).

A three between-groups design with a random sample (N=95) of university students was employed to test the differences in the three dimensions of mental imagery when exposed to a pop-up mobile ad. Each version of the stimulus presented a mobile ad with the same picture but differed on the brand that signed the ad —the

logo of a well-known brand, the logo of a poorly known brand, and a fictitious brand (see appendix I). We expected that the use of a familiar brand would encourage participants to process the ad (stimuli) more thoroughly since the familiarity with the brand would make it easier to retrieve information stored in the memory. In addition, individual's ability to use imagery processing information was controlled.

Sample

Participants in this study, undergraduate students from a Marketing course at an important Spanish university (N=95, female=61.1%, male=38.9%, median age=19, cell sizes ranged from 31 to 33) were voluntarily recruited and assigned to one of the three experimental situations according to their birth date –January to April, May to August, and September to December. Students were rewarded with extra credit for their participation, and were randomly selected from a list of volunteers. A random number generation strategy was used to select participants. All participants signed their consent to form part of the study.

Stimuli and Pre-Test

Three final artworks were designed by a creative advertising executive in the form of an online advertisement; Pull & Bear was the well-known brand, Custo, the poorly known brand, and Soul Look, the fictitious brand, for which we created a logo. Aside from the brand logo, the pop-up mobile ads were copy-free (see appendix I).

To enhance the likelihood that the sample would process the target ad, when choosing the product, we initially administered a brief questionnaire to a sample of 34 undergraduate students in which we asked them about their interest in various product categories. Participants rated their level of interest in, and their degree of familiarity with, fashion and accessories, cosmetics, food and beverages, and mobile devices on a seven-point Likert scale (1 = lowest and 7 = highest). Clothes were rated highly in both dimensions ($M_{Fashion}$=4.8, SD=1.44 for interest, $M_{Fashion}$=5.1, SD=.85 for familiarity).

To ensure the correct manipulation of the ad content we conducted three pre-tests. First, to assess the appropriateness of the brand choice we conducted a pre-test with a sample of 35 undergraduate students –outside the sample– who rated a list of 10 clothing brands preselected from BrandZ Top. Each brand was rated on familiarity using a seven-point Likert scale (1 = lowest and 7 = highest). Pull & Bear obtained the highest score M=6.4, SD=.84) whereas Custo showed the lowest score (M=1.2, SD=.43)

Then, we conducted a pre-test in the form of a classifying task to assess the adequacy of the pictures. A creative advertising executive preselected a set of 10 pictures for a clothing advertisement targeted at twenty-year-old urban youngsters. A sample of 25 subjects belonging to this target was asked to select and rank the three that

best fit with a clothing ad. The picture selected for the experiment was the favourite for 68% of the sample. Finally, we conducted a third pre-test (N=10) to evaluate the wording and understandability of the scales used in the study and the whole survey.

Main study

Participants were informed that they would be taking part in a study on digital marketing and shopping preferences. Using their own smartphones, they entered in a specific URL where the questionnaire was hosted (https://forms.gle/XBukYYZeH3SPEWyC9). Prior to entering the questionnaire, participants gave their explicit consent to be part of the study; they were then randomly assigned to an experimental situation according to their date of birth. They were asked to complete a self-administered online questionnaire that included several questions about their familiarity with the three selected brands –well-known, poorly known, and fictitious brand–, and two other real brands. Immediately after, participants were invited to browse a digital ad for a few seconds (3-15 sec.). Afterwards, participants answered the questions about the evoked mental imagery.

Finally, participants answered a personality profile that included items about their ability to use imagery processing (since we controlled the individual's ability to use imagery processing information), and some extra questions about shopping behavior. It took them 5 to 7 minutes to fill it out the whole questionnaire. Participants were then fully debriefed and thanked for their collaboration. The study was conducted in September 2019.

Measurement scales

Brand familiarity: A three-item brand familiarity scale adapted from Kent and Allen (1994) was used. '*Regarding the brand are you:*' (familiar/unfamiliar; inexperienced/experienced; knowledgeable/not knowledgeable. This was rated on a 7-point semantic differential scale (ranging from 1 = strongly low to 7 = strongly high).

Mental imagery ability: The individual's ability to use imagery processing information was measured by the Vividness of Visual Imagery Questionnaire (Marks, 1973). This scale distinguishes between low and high visualizers and has been used in advertising research to control for potential individual differences in the use of mental imagery during information processing (Fennis et al., 2012; Petrova & Cialdini, 2005). The scale consists of 16 items rated on a 1-5 unipolar scale ranging from 1 = no image at all, to 5 = a very clear mental image. In this study, scores of the 16 items had very high internal consistency (Cronbach's alpha = 0.81). A factor analysis yielded one major factor suggesting that Mental Imagery Ability (MIA) is a unidimensional construct and a genuine individual-differentiating internal disposition. We averaged the item scores to arrive at the individual's MIA score, which could range from 1.0 to 5.0.

Variable		Items	Adapted from
Brand familiarity (independent variable)		Regarding the brand are you: *familiar/unfamiliar; inexperienced/experienced; knowledgeable/not knowledgeable.*	Kent & Allen (1994)
Mental imagery (dependent variable)	Vividness	*I clearly imagine what appears in the advertisement. I can visualize the scene as if I were there. I can imagine what the protagonists are feeling. The advertisement suggests well-defined and precise images to me.*	Babin & Burns (1998)
	Quantity	*This message makes many images come to my mind. The ad makes me imagine a lot of things.*	
	Elaboration	*I can imagine myself in the clothes. I can imagine myself in the scene.*	
Mental imagery ability (moderator variable)	Think of a relative or friend that you see frequently (but who is not with you at the moment) and visualize him/her.	*What he/she looks like: contour of the face, head, shoulders, and body. His/her typical posture. The way he/she walks. The clothes he/she wears.*	Marks (1973)
	Think of a sunset. Visualize it.	*The sun dropping toward the horizon through clouds. Last rays of light. A lightning storm breaks out . It ends and the rainbow comes out.*	
	Think of the window display of a store you go to often. Visualize it.	*The window display with details. The products in it. The store entrance . The counter where someone is shopping.*	
	Finally, think of a nature scene.	*The landscape. The colors of the trees. The water in the lake. The effect of a gust of wind on the water's surface.*	

Table 1. Variables, items, and scales used

Source: Own elaboration.

*Mental imagery***:** To measure mental imagery, we adapted the scale developed by Babin and Burns (1998) consisting of three dimensions: vividness, quantity, and elaboration. Vividness refers to the clarity with which the individual experiences an image and taps into the quality aspects of evoked mental imagery (Babin & Burns, 1998; Marks, 1973). Vividness was measured using four items. Quantity of imagery refers to the number of images that come to mind while processing the information (McGill & Anand, 1989). This was measured using two items. Elaboration refers to the activation of information, beyond that provided by the stimulus, in the generation of mental imagery (Babin & Burns 1998); it was measured using two items. All items were measured using a 7-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree).

Table 1 provides a list of the scales and items used to measure in the experiment.

We then conducted an ANCOVA with the visual input as predictor, the summed and averaged scales of mental imagery as explained variables, and the individual's score of mental imagery ability (MIA) as a covariate. The goal was to test that a familiar (vs. unfamiliar) brand will be more likely to enhance the ability of a mobile ad to evoke mental imagery (vividness, quantity, and elaboration).

RESULTS

Manipulation check: The results show that the ad manipulation was successful ($F(2,94)=479.53$, $p<.000$). Participants exposed to the familiar brand ad (Pull & Bear) scored $M_{HFamBrand}$[1]=5.91, SD=1.01; participants exposed to the low familiar brand ad (Custo) scored $M_{LFamBrand}$[2]=1.39, SD=.62; all the participants exposed to the fictitious brand ad (Soul Look) admitted their lack of familiarity (M_{FictAd}[3]=1.08, SD=.19). Individual mental imagery ability did not differ between the groups ($M_{MIA\ Pull\ and\ Bear}$=4.02, SD=.41; $M_{MIA\ Custo}$=3.98, SD=.57; $M_{MIA\ Soul\ Look}$=3.93, SD=.50), $F(2, 94)=.254$, $p>.05$.

Mental imagery scale: The eight items of the mental imagery scale were subjected to principal component analysis (PCA). The KMO value was .796, and Bartlett's Test of Sphericity was significant ($p<.000$). The number of extracted factors with eigenvalues equal to or greater than one was three. All items were assessed on the appropriate factor with factor loadings higher than .6. Reliability was measured with Cronbach's alpha = .878 (Nunnally, 1978). The scale was summed and averaged (M_IMAGERY) to form an index of mental imagery to be used in further analysis. The scale was also summed and averaged to form several indexes of imagery according to their dimensions (vividness, quantity, elaboration).

Brand-evoked imagery effect: an ANCOVA was run with the visual input as predictor, the summed and averaged scales of mental imagery as explained variables, and the individual's score of mental imagery ability (MIA) as a covariate.

The assumption of the homogeneity of the regression slopes (Input * MIA $p>.05$), the independence of the independent variable and covariate, and the lack of significance of Leven's test ($p>.05$) were fully satisfied.

The results indicate that the covariate –the individual's mental imagery ability (MIA)– is significantly related to mental imagery, $F(1,91)=6.655$, $p<.05$ and exerts a positive effect, as expected. There is also a significant effect of the visual input on levels of mental imagery, $F(2,91) = 10.361$, $p<.00$.

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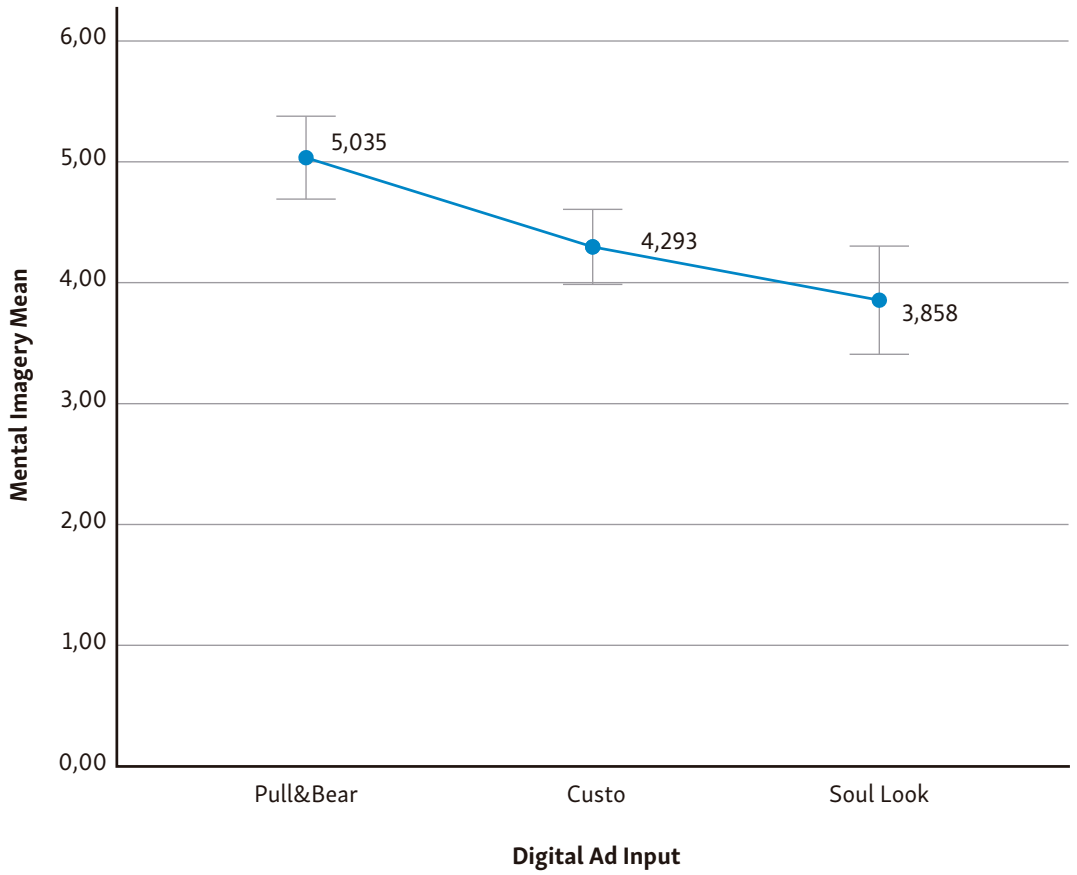
1. $M_{HFamBrand}$: Mean high familiar brand (Pull & Bear).

2. $M_{LFamBrand}$: Mean low familiar brand (Custo).

3. M_{FictAd}: Mean of fictitious brand ad (Soul Look).



*Covariates appearing in the model are evaluated at the following values: MIA=3.9789.

Figure 2. Differences of mental imagery between groups*

Source: Own elaboration.

Pairwise comparisons revealed that an ad containing a familiar brand significantly increased the evoked mental imagery compared to the same ad containing either a low familiar brand (p=.013) or a fictitious brand (p<.000). However, it is interesting to notice that the difference between the low familiar brand and the fictitious brand is not significant (p=.276) (see figure 2). This result suggests that brand familiarity plays a significant role while processing advertising.

We then conducted a MANCOVA with the three dimensions of mental imagery (vividness, quantity, and elaboration) as dependent variables and the three visual inputs as predictors (table 2). The MANCOVA results indicate that MIA is significantly related to the vividness and elaboration dimension of mental imagery, but not to the quantity dimension. On the other hand, the visual input (digital ad) exerted a significant influence on the three dimensions of mental imagery (table 3).

	TREATMENTS[a]		
	High familiar brand ad (Pull & Bear) (n=31)	**Low familiar brand ad (Custo) (n=33)**	**Fictitious brand ad (Soul Look) (n=31)**
M_Imagery	5.03 (.83)	4.29 (.89)	3.85 (1.05)
Vividness	5.41 (.71)	5.12 (.80)	4.39 (.92)
Quantity	4.45 (1.43)	3.55 (1.22)	3.13 (1.64)
Elaboration	4.98 (1.29)	4.21 (1.54)	3.82 (1.98)

[a] Covariates appearing in the model are evaluated at the following values: MIA=3.9789.

Table 2. Means and (Standard Deviation) for the visual (advertising) input.

Source: Own elaboration.

Source	**ANCOVA**		**MANCOVA *F*-Values**					
	df	**F-Value**	***df***	**Vividness**	***df***	**Quantity**	***df***	**Elaboration**
Covariate								
MIA	1	6.66*	1	3.468*	1	1.172	1	5.163*
Main Effects								
Visual input	2	10.361**	2	10.092**	2	6.527**	2	3.785*
Residual	91		91		91		91	

* p<.05, ** p<.01

Table 3. Effects of visual input on imagery dimensions

Source: Own elaboration.

Pairwise comparisons show that the presence of a high familiar brand significantly increases the vividness of mental imagery. Differences arise between ads of real brands –either of high or low familiarity (p=.52)– and ads of a fictitious brand (p<.00) (see figure 3).

Regarding the quantity dimension of mental images, the effect of familiarity increases it when comparing high familiar brand ads to low familiar brand ads (p=.045), as well as when comparing high familiar brand ads to fictitious brand ads (p=.002). Nevertheless, there is no significant difference between low familiar brand ads and fictitious brand ads (p=.612).

Lastly, brand familiarity significantly impacts the elaboration of mental imagery only when comparing high familiar brand ads to a fictitious brand ad (p=.025).

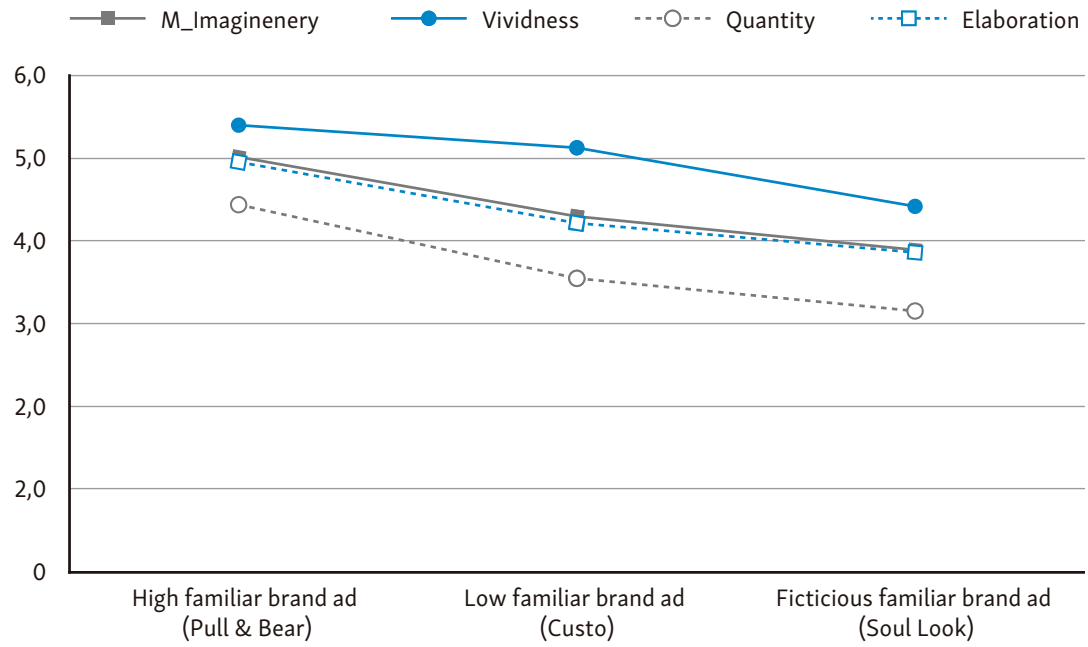


Figure 3. Differences of mental imagery dimensions between groups

Source: Own elaboration.

These results confirm the influence of brand familiarity on mental imagery. They also suggest that the difficulties in eliciting mental imagery emerge from the lack of familiarity with the brand; in other words, below certain levels of brand familiarity, mental imagery of ads suffers.

DISCUSSION AND CONCLUSIONS

The goal of this research was to explore the role of brand familiarity on mental imagery in the context of digital advertising, the so-called brand-evoked mental imagery. Findings shows that a brand can exert a significant influence on mental imagery when processing advertising. Familiarity with the brand helps the ad to be more thoroughly processed, since brand familiarity makes it easier to retrieve information stored in the memory. On the contrary, the lack of familiarity with the brand seems to be a barrier to eliciting vivid, numerous, and elaborated mental images.

Brand presence may act as a sort of anchor on mental imagery processing. Exceptionally, brand familiarity, even at low levels, enable to create better quality images: this is vividness. Concerning quantity, referred to the number of images that come to mind evoked by a stimulus, and elaboration, which measures the activation of information beyond what the stimulus provides, both significantly

decrease when brand familiarity does not reach a sufficient level. This means that the brand connects consumers with relevant memories and past brand experiences.

Regarding mental imagery ability, the significant influence of MIA has already been supported in literature (Fennis et al., 2012), as it happened in this research.

Brand-evoked mental imagery is a type of *thought*, generated in consumers as a consequence of branding, which arises from the need to respond to the demands of the external world and facilitates the processing of advertising. The relevance of mental imagery has already been tested. Consumers proactively use imagery as part of their approach to making purchase decisions.

Theoretically, this work contributes directly to the communications and persuasion literature on mental imagery (MacInnis & Price, 1987; Bone & Ellen, 1992; Burns et al., 1993; Unnava et al., 1996; Miller, 2000; Fennis et al., 2011), increasing the knowledge about antecedents of mental imagery in digital contexts. More generally, it adds to branding literature since the brand-evoked mental imagery effect is the result of the branding process. A relevant implication of this study is that it indicates that it is worthwhile to consider the dimensionality of the mental imagery construct. Even though vividness is frequently used as a mental imagery proxy, focusing on each dimension provides a deeper understanding of the underlying dynamics. In fact, low levels of brand familiarity damage quantity and elaboration before vividness.

This study differs from previous research on mental imagery processing in the field of advertising. Previous research has shown that mental imagery elicited by advertising exerts a positive influence on building brand attitude (Bone & Ellen, 1992; Burns et al., 1993; Unnava et al., 1996; Babin & Burns, 1997; Chang, 2013). However, those studies were developed using fictitious brands. Our results do not contradict prior studies, but rather analyze a situation that actually exists: when consumers face advertising, the brand could be already known and sometimes consumers even have a previous experience with it. Therefore, familiarity facilitates the creation of vivid, numerous, and elaborated mental imagery.

In line with this research, another interesting area for future research would be to analyze moderator variables of brand-evoked mental imagery. Since brand is a multidimensional concept, certain brand dimensions could moderate this effect. For example, brand favorability –referred as the brand's ability to provoke positive feelings about itself– would exert a significant effect on mental imagery, since cognitive elaboration of imagery representations depends on the favorableness of the information available in the memory (Kisielius & Sternthal, 1986). Mental imagery stems from sensory information and could increase in consonance

with the availability of favorable information provided in the message. As long as brand familiarity, moderated by brand favorability, increases, it would be interesting to gauge to what extent mental imagery processing becomes more vivid, numerous, and elaborated.

Likewise, congruency between the ad and the brand could enhance mental imagery because congruent messages facilitate message processing by catching the consumers' attention and priming relevant information stored in their memory (Smith & Shaffer, 2000).

This study is not exempt of limitations. We did not collect any data regarding the effect of mental imagery in consumer response to the mobile ad. Both in our conceptual development and in our experimental designs, we have tried to keep our context as simple and as clean as possible, deliberately avoiding studying any cognitive, attitudinal, and behavioral response to mental imagery. However, this decision has been supported on the evidence provided in literature. Mental imagery increases attention (Rodero, 2012), ad recall and attitude towards the ad (Chang, 2013), brand beliefs and recall (Mikhailitchenko et al., 2009), and emotions (Suess & Abdel Rahman, 2015). In the digital environment, researchers have also shown that mental imagery increases advertising trust (Gavilan et al., 2014), intention to purchase in the web (Argyriou, 2012), and immersion experiences (Derbaix & Gombault, 2016).

In this research, we have used the logo as stimuli to test the brand-evoked mental imagery effect. The logo is used to represent the brand, because the design of the logo encompasses certain traits of it. The ability of the logo to evoke content has been tested; for instance, Cian, Krishna, and Elder (2014) provide evidence of how a logo´s graphic design is able to express dynamism through what they called dynamic imagery. It would be interesting to conduct further research along these lines on the logo influence, which merges both a visual and a cognitive code, and the impact of the brand name without a graphical representation. Future research is needed to analyzed differences among brands due to the level of familiarity.

Mental imagery is influenced by branding. Based on this research, it could be said that the mere presence of the brand triggers a wealth of thoughts and emotions when the subjects may connect the brand with their knowledges, and the feelings that it arises in a life full of experiences.

They say that a picture paints a thousand words. Maybe certain words, when referring to brands, also paint a thousand pictures in our minds.

REFERENCES

Aaker, D. A. & Stayman, D. M. (1992). Implementing the concept of transformational advertising. *Psychology and Marketing, 9*(3), 237-253. https://doi.org/10.1002/mar.4220090306

Amit, E., Hoeflin, C., Hamzah, N., & Fedorenko, E. (2017). An asymmetrical relationship between verbal and visual thinking: Converging evidence from behavior and fMRI. *NeuroImage, 152*, 619-627. https://doi.org/10.1016/j.neuroimage.2017.03.029

Argyriou, E. (2012). Consumer intentions to revisit online retailers: a mental imagery account. *Psychology and Marketing, 29*(1), 25-35. https://doi.org/10.1002/mar.20405

Babin, L. A. & Burns, A. C. (1998). A modified scale for the measurement of communication-evoked mental imagery. *Psychology and Marketing, 15*(3), 261-278. https://doi.org/10.1002/(sici)1520-6793(199805)15:3<261::aid-mar4>3.0.co;2-8

Bone, P. F. & Ellen, P. S. (1992). The generation and consequences of communication-evoked imagery. *Journal of Consumer Research, 19*(1), 93-104. https://doi.org/10.1086/209289

Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty? *Journal of Marketing, 73*(3), 52-68. https://doi.org/10.1509/jmkg.73.3.052

Burns, A. C., Biswas, A., & Babin, L. A. (1993). The Operation of Visual Imagery as a Mediator of Advertising Effects. *Journal of Advertising, 22*, 71-85. https://doi.org/10.1080/00913367.1993.10673405

Campbell, M. C. & Keller, K. L. (2003). Brand familiarity and advertising repetition effects. *Journal of Consumer Research, 30*(2), 292-304. https://doi.org/10.1086/376800

Chang, C. (2013). Imagery fluency and narrative advertising effects. *Journal of Advertising, 42*(1), 54-68. https://doi.org/10.1080/00913367.2012.749087

Cian, L., Krishna, A., & Elder, R. S. (2014). This Logo Moves Me: Dynamic imagery from Static Images. *Journal of Marketing Research, 51*(2), 184-97. https://doi.org/10.1509/jmr.13.0023

Derbaix, M. & Gombault, A. (2016). Selling the invisible to create an authentic experience: imagination at work at Cézanne's studio. *Journal of Marketing Management, 32*(15-16), 1458-1477. https://doi.org/10.1080/0267257X.2016.1199588

Ditrendia. (2018). Informe Mobile en España y en Mundo 2018 (2018 Mobile Report in Spain and in the World). Retrieved from https://mktefa.ditrendia.es/informe-mobile-2018?hsCtaTracking=d2a58815-54a9-42e6-8864-852e9226150f%7C5ce44ed6-3d5b-474e-984c-4a0f0959802a

Elder, R. S. & Krishna, A. (2011). The 'visual depiction effect' in advertising: facilitating embodied mental simulation through product orientation. *Journal of Consumer Research, 38*(6), 988-1003. https://doi.org/10.1086/661531

Escalas, J. E. (2004). Imagine yourself in the product: mental simulation, narrative transportation, and persuasion. *Journal of Advertising, 33*(2), 37-48. https://doi.org/10.1080/00913367.2004.10639163

Fennis, B. M., Das, E., & Fransen, M. L. (2012). Print advertising: vivid content. *Journal of Business Research, 65*(6), 861-864. https://doi.org/10.1016/j.jbusres.2011.01.008

Gavilan, D., Avello, M., & Abril, C. (2014). The mediating role of mental imagery in mobile advertising. *International Journal of Information Management, 34*(4), 457-464. https://doi.org/10.1016/j.ijinfomgt.2014.04.004

Ha, S., Huang, R., & Park, J. S. (2019). Persuasive brand messages in social media: A mental imagery processing perspective. *Journal of Retailing and Consumer Services*, *48*, 41-49. https://doi.org/10.1016/j.jretconser.2019.01.006

Hartmann, P., Apaolaza, V., & Alija, P. (2013). Nature Imagery in Advertising: Attention Restoration and Memory Effects. *International Journal of Advertising*, *32*(2), 183-210. https://doi.org/10.2501/IJA-32-2-183-210

Herrero-Diz, P., Tapia-Frade, A., & Varona-Aramburu, D. (2020). La consolidación de los dispositivos móviles para el consumo de información en España (The consolidation of mobile devices for information consumption in Spain). *Cuadernos.info*, (46), 203-221. https://doi.org/10.7764/cdi.46.1741

Holmes, E. A., Mathews, A., Mackintosh, B., & Dalgleish, T. (2008). The causal effect of mental imagery on emotion assessed using picture-word cues. *Emotion, 8*(3), 395-409. https://doi.org/10.1037/1528-3542.8.3.395

Hoyer, W. D. & Brown, S.P. (1990). Effects of Brand Awareness on Choice for a Common, Repeat-Purchase Product. *Journal of Consumer Research*, *17*, 141-148. https://doi.org/10.1086/208544

Jiang, Y., Adaval, R., Steinhart, Y., & Wyer Jr., R. S. (2014). Imagining yourself in the scene: The interactive effects of goal-driven self- imagery and visual perspectives on consumer behavior. *Journal of Consumer Research, 41*(2), 418-435. https://doi.org/10.1086/676966

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity, *Journal of Marketing, 57*(1), 1. https://doi.org/10.2307/1252054

Keller, K. L. (2003). Brand Synthesis: The Multidimensionality of Brand Knowledge. *Journal of Consumer Research*, *29*(4), 595-600. https://doi.org/10.1086/346254

Kent, R. J. & Allen, C. T. (1994). Competitive interference effects in consumer memory for advertising: the role of brand familiarity. *Journal of Marketing, 58*(3), 97-105. https://doi.org/10.2307/1252313

Kisielius, J. & Sternthal, B. (1986). Examining the vividness controversy: an availability-valence interpretation. *Journal of Consumer Research, 12*(4), 418-431. https://doi.org/10.1086/208527

Lee, W. & Gretzel, U. (2012). Designing persuasive destination websites: A mental imagery processing perspective. *Tourism Management, 33*(5), 1270-1280. https://doi.org/10.1016/j.tourman.2011.10.012

Li, H., Daugherty, T., & Biocca, F. (2003). The role of virtual experience in consumer learning. *Journal of Consumer Psychology, 13*, 395-407. https://doi.org/10.1207/S15327663JCP1304_07

MacInnis, D. J. & Price, L. L. (1987). The role of imagery in information processing: review and extensions. *Journal of Consumer Research, 13*(4), 473-491. https://doi.org/10.1086/209082

Madden, Th. J., Fehle, F., & Fournier, S. (2006). Brands Matter: An Empirical Demonstration of the Creation of Shareholder Value through Branding. *Journal of the Academy of Marketing Science*, *34*(2), 224-235. https://doi.org/10.1177/0092070305283356

Maier, E. & Dost, F. (2018). The positive effect of contextual image backgrounds on fluency and liking. *Journal of Retailing and Consumer Services*, *40*, 109-116. https://doi.org/10.1016/j.jretconser.2017.09.003

Marks, D. F. (1973). Visual imagery differences in the recall of pictures. *British Journal of Psychology, 64*(1), 17-24. https://doi.org/10.1111/j.2044-8295.1973.tb01322.x

McGill, A. L. & Anand, P. (1989). The effect of vivid attributes on the evaluation of alternatives: the role of differential attention and cognitive elaboration. *Journal of Consumer Research, 16*(2), 188-196. https://doi.org/10.1086/209207

Mikhailitchenko, A., Javalgi, R. R. G., Mikhailitchenko, G., & Laroche, M. (2009). Cross-cultural advertising communication: Visual imagery, brand familiarity, and brand recall. *Journal of Business Research, 62*(10), 931-938. https://doi.org/10.1016/j.jbusres.2007.11.019

Miller, D. W., Hadjimarcou, J., & Miciak, A. (2000). A scale for measuring advertisement-evoked mental imagery. *Journal of Marketing Communications, 6*(1), 1-20. https://doi.org/10.1080/135272600345525

Murillo-Zegarra, M., Ruiz-Mafe, C., & Sanz-Blas, S. (2020). The Effects of Mobile Advertising Alerts and Perceived Value on Continuance Intention for Branded Mobile Apps. *Sustainability*, *12*(17), 6753. https://doi.org/10.3390/su12176753

Myers, J. & Sar, S. (2015). The influence of consumer mood state as a contextual factor on imagery-inducing advertisements and brand attitude. *Journal of Marketing Communications*, *21*(4), 284-299. https://doi.org/10.1080/13527266.2012.762421

Nunnally, J. C. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.

Paivio, A. (1990). *Mental representations: A dual coding approach.* Oxford, United Kingdom: Oxford University Press.

Park, J. & Stoel, L. (2005). Effect of brand familiarity, experience, and information on online apparel purchase. *International Journal of Retail and Distribution Management*, *33*(2), 148–160. https://doi.org/10.1108/09590550510581476

Petrova, P. K. & Cialdini, R. B. (2005). Fluency of Consumption Imagery and the Backfire Effects of Imagery Appeals. *Journal of Consumer Research*, *32*(3), 442-452. https://doi.org/10.1086/497556

Rhee, E. S. & Jung, W. S. (2019). Brand familiarity as a moderating factor in the ad and brand attitude relationship and advertising appeals. *Journal of Marketing Communications*, *25*(6), 571-585. https://doi.org/10.1080/13527266.2018.1461124

Rodero, E. (2012). See it on a radio story: sound effects and shots to evoke imagery and attention on audiofiction. *Communication Research, 39*(4), 458-479. https://doi.org/10.1177/0093650210386947

Smith, S. M. & Shaffer, D. R. (2000). Vividness Can Undermine or enhance Message Processing: The Moderating Role of Vividness Congruency. *Personality and Social Psychology Bulletin*, *26*(7), 769-79. https://doi.org/10.1177/0146167200269003

Sternberg, R. J. (2003). *Cognitive theory* (3rd ed.). Belmont, CA: Thomson Wadsworth.

Suess, F. & Abdel Rahman, R. (2015). Mental imagery of emotions: Electrophysiological evidence. *NeuroImage, 114*, 147-157. https://doi.org/10.1016/j.neuroimage.2015.03.063

Truong, Y., McColl, R., & Kitchen, P. (2010). Practitioners' perceptions of advertising strategies for digital media. *International Journal of Advertising*, *29*(5), 709-725. https://doi.org/10.2501/S0265048710201439

Unnava, H. R., Agarwal, S., & Haugtvedt, C.P. (1996). Interactive effects of presentation modality and message-generated imagery on recall of advertising information. *Journal of Consumer Research, 23*(1), 81-88. https://doi.org/10.1086/209468

Yoo, J. & Kim, M. (2014). The effects of online product presentation on consumer responses: A mental imagery perspective. *Journal of Business Research, 67*(11), 2464-2472. https://doi.org/10.1016/j.jbusres.2014.03.006

Yu, U., Cho, E., & Johnson, K. K. (2017). Effects of brand familiarity and brand loyalty on imagery elaboration in online apparel shopping. *Journal of Global Fashion Marketing, 8*(3), 193-206. https://doi.org/10.1080/20932685.2017.1284603

Zaltman, G. (1997). Rethinking Market Research: Putting People Back In. *Journal of Marketing Research*, 34(4), 424-437. https://doi.org/10.1177/002224379703400402

Zenith Media. (2019). *Advertising Expenditure Forecasts June 2019*. London: Zenith, Publicis Media.

APPENDIX I
Experimental inputs

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